PCT

(54) Title: SYSTEM AND METHOD FOR APPLYING AND TRACKING A CONDITIONAL VALUE COUPON FOR A RETAIL ESTABLISHMENT

(57) Abstract

A system and method for encouraging customer purchasing habits that are beneficial to the retail establishment by offering conditional value coupons includes a point of sale (POS) controller (104) that determines the discount value of the conditional coupon based on a predefined set of purchasing conditions. The system and method determine a purchase price of a customer's transaction and scan an identifier, typically provided on a coupon. The identifier is used to retrieve a record from a database (138) that provides different discount values associated with the conditional coupon and a set of corresponding, predetermined conditions. The POS controller (104) selects one of the discount values provided by the identified record based upon whether an associated, predetermined condition is satisfied. The purchase price of the transaction is then reduced based on the selected discount.

SYSTEM AND METHOD FOR APPLYING AND TRACKING A CONDITIONAL VALUE COUPON FOR A RETAIL ESTABLISHMENT

5   **CROSS REFERENCE TO RELATED APPLICATIONS**

This application is related to co-pending United States patent application Serial No. 09/076,409 entitled "METHOD AND APPARATUS FOR GENERATING A COUPON" filed on May 12, 1998 in the name of Jay S. Walker, et al.

10   **BACKGROUND OF THE INVENTION**

Field of the Invention

The present invention relates to purchasing systems and more particularly to purchasing systems that apply a discount or reward to a customer's purchase wherein

15   the discount value is conditional on a set of predetermined events or purchases.

Description of the Related Art

Many retail establishments, particularly grocery stores, pursue marketing strategies to attract customers and to influence customers to develop buying habits that are most beneficial to the store. One conventional method of influencing a

20   customer's buying habits is offering discounts that reduce the price of a service or product offered by the grocery store. These discounts may be in the form of free standing inserts (FSIs), coupons, and loss leaders. Generally, coupons provide a discount for a particular product or brand of product to encourage the customer to shop at the grocery store, or to promote or switch brand loyalty. These coupons may

25   also be limited to a particular time period to encourage the shopper to visit the store during this time. For example, the coupon or discount may only be effective for a

particular day of the week (e.g., Saturday). If the coupon is not used on that day, the coupon is worthless.

While these coupons may promote certain customer purchasing habits, such as when to visit the store or which product to purchase, customers may find the limited

5   use of the coupon frustrating and therefore, not worth saving or using.

Furthermore, weekly advertised specials and coupons by their very nature only attract customers for a given time period and do not incrementally promote customer buying habits. Since the specials or discounts vary from week to week, there is no guarantee or likelihood that a store will be discounting exactly what the consumer is

10   interested in buying every grocery trip. Most consumers, therefore, scan the weekly advertisement of every grocery store in their area before doing their weekly grocery shopping and choose to go to the store that most meets their needs.

Another attempt to attract customers and encourage customer buying habits is the implementation of a frequent shopper card program. This program provides a

15   customer with a frequent shopper card that is presented at the time of purchase. Presentation of the card enables the customer to receive special weekly discounts on specific items purchased. Essentially, these programs act as a paperless coupon redemption system.

The frequent shopper card programs are also used to track a customer's

20   shopping habits. The frequent shopper card includes a customer identifier that enables the retailer to identify, record and track a frequent shopper's purchases. The customer's shopping history is then used to perform targeted marketing functions, such as compiling mailing lists and sending out advertising material or printing point-of-sale

(POS) coupons to the customer, similar to the Catalina Marketing system which allows

stores to print sales offers and discount coupons at the checkout counters. When the

POS coupons are redeemed, the coupons are scanned by the cashiers and the amount of

the discount is deducted from the total amount of the purchase. This precision

5   marketing permits the POS coupon to have 40% more face value than traditional FSI

coupons. While the POS coupon may provide additional discount to the consumer to

promote customer loyalty or to change brand loyalty, the incentive to encourage buying

habits of the customer is not much more than that presented by an FSI coupon. Again

the limited use of the coupon may discourage the customer from using the coupon and

10   may even have the opposite effect of attracting customers.

With the considerable number of supermarket stores in any given area, there

exists a need for systems and processes which provide a supermarket with the ability to

incrementally reward a customer for buying habits or purchases that are beneficial to

the store.

15   **SUMMARY OF THE INVENTION**

It is an object of the present invention to provide new and improved systems

and methods for retail establishments to encourage and reward customers' purchasing

habits or purchases that are beneficial to the retail establishment by providing

conditional value coupons that provide different discount values based on a predefined

20   set of purchasing conditions. For instance, conditional coupons may encourage a

customer to increase his frequency of visits and purchase totals.

According to the present invention, a method and system are disclosed for

processing a purchase by a customer of a retail establishment, comprising receiving an

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identifier and determining a first discount and second discount from the identifier. The

identifier may be used to retrieve a record of the first and second discount from a

database. The first discount has a first discount value and the second discount has a

second discount value. The method and system further comprises determining a

5   predetermined condition of the purchase and selecting one of the first discount and the

second discount based on whether the predetermined condition is satisfied, thereby

generating a selected discount having a selected discount value. The selected discount

is then applied to the customer's purchase.

BRIEF DESCRIPTION OF THE DRAWINGS

10   The present invention is described in detail below with reference to the

following drawing figures of which:

FIG. 1 is a block diagram of a point-of-sale (POS) terminal of a purchasing

system configured in accordance with a preferred embodiment of the present invention;

FIG. 2 is a block diagram of a point-of-sale (POS) controller configured in

15   accordance with a preferred embodiment of the present invention;

FIG. 3 is a diagram of a conditional discount coupon used with the purchasing

system of FIG. 1;

FIG. 4 is an illustration of a database table referred to as the INVENTORY

DATABASE database in FIG. 2;

20   FIG. 5 is an illustration of a database table referred to as the TRANSACTION

DATABASE database in FIG. 2;

FIG. 6 is an illustration of a database table referred to as the FREQUENT

SHOPPER DATABASE database in FIG. 2;

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FIG. 7 is an illustration of a database table referred to as the COUPON VALUE

DATABASE database in FIG. 2;

FIGS. 8A and 8B are flowcharts that illustrate the operations carried out for

determining and applying a conditional discount to a customer's current purchase

5   according to a preferred embodiment of the present invention; and

FIG. 9 is an illustration of a database table referred to as the REDEEMED

COUPON DATABASE database in FIG. 2.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In this section, the present invention is described with regard to the drawing

10   figures briefly described above.

As such, the following terms are used throughout the remainder of this section.

For purposes of construction, such terms shall have the following meanings:

The terms "item", "product", "goods", and "services", unless otherwise

specified, are intended to refer to any item sold or offered by a retailer. Accordingly,

15   for purposes of construction, the terms "item", "product", "goods" or "services" shall

be treated as synonyms.

The terms "store", "retailer", "supermarket", and "retail establishment", unless

otherwise specified, are intended to refer to any retail merchandising establishment that

caters to the public and that allows customers to select products and services. Retail

20   establishments may be a retail store such as a warehouse, a supermarket or grocery

store, a department store, or any other retail or merchandising establishment.

Accordingly, for purposes of construction, the terms "store", "retailer", "supermarket",

and "retail establishment" shall be treated as synonyms.

The terms "customer", "consumer", "purchaser" and "shopper", unless otherwise specified, are intended to refer to any person, group of people, or other entity that visits or otherwise patronizes a retailer and who purchases products and services from the retailer. Accordingly, for purposes of construction, the terms "customer",

5 "consumer", "purchaser" and "shopper" shall be treated as synonyms.

The terms "purchase" and "transaction", unless otherwise specified, are intended to refer to the purchasing of any item or group of items. Accordingly, for purposes of construction, the terms "purchase" and "transaction" shall be treated as synonyms.

The following is a description of the structural and operational aspects of the

10 present invention. The structural aspects are described first and are followed by a description of the operational aspects.

In terms of structure, reference is now made to FIGS. 1 and 2. Therein depicted is a block diagram representing a purchasing system 100 for a retail establishment equipped to record and tally a customer's transaction and apply an appropriate discount

15 to the customer's transaction based on a coupon presented by a customer and a set of pre-defined conditions.

In one embodiment, the purchasing system 100 includes a point of sale (POS) terminal 102 and a POS controller 104. The POS terminal 102 is coupled to the POS controller 104 via a data link 106. In addition, the POS terminal 102 also

20 communicates with a printer 108 and an input device 110. As shown in FIG. 1, printer 108 and input device 110 are coupled to POS terminal 102 via data links 120, 122, respectively. The functionality could all be contained in one POS terminal, or a terminal/server network.

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A link such as links 106, 120 and 122 preferably comprises a network

connection and/or a serial connection. For example, links 106, 120 and 122 may be a

10BaseT connection enabling Internet communications between POS terminal 102 and

POS controller 104. Of course, many other forms of communication links may be used

5   as is apparent to those skilled in the art. Such other data links may include network

connections, wireless connections, radio-based communications, telephony-based

communications, and other network-based communications such as wide area networks

distributed via open architectures such as by the Internet.

As shown in FIG. 1, POS terminal 102 is a data processing system including a

10   central processing unit (CPU) 124, a random access memory unit (RAM) 126, a read-

only memory unit (ROM) 128. The POS terminal 102 is operable to receive data

signals from the input device 110 and process the information in combination with data

received from the POS controller 104 via link 106.

Input device 110 generates signals that identify the item being purchased, a

15   customer using a Frequent Shopper Card and/or a coupon, wherein UPC bar codes are

used to identify the purchased item, the customer and the coupon. Input device 110

may be a scanning device similar to the type found in the POS terminals of grocery

stores. These scanning devices are capable of reading a first UPC bar code provided on

the item to be purchased, a second UPC bar code provided on a customer's Frequent

20   Shopper Card (not shown) which provides the identity or account number of the

customer, and a third UPC bar code provided on a conditional coupon. The scanning

device transmits signals representing the scanned bar codes to POS terminal 102 via

data link 122. In another embodiment, the input device may be a key pad which

includes alphanumeric keys. Such keys are actuated to indicate codes that represent a purchased item, a customer and/or a coupon.

In addition the input device 110 may be operable to read information stored in a card having a magnetic storage medium (i.e., a magnetic strip), or in a smart card having an integrated circuit including readable memory. Similarly, conditional coupons can be stored on a magnetic storage medium or a smart card. Such coupons may be redeemed by swiping the card or otherwise reading the card at the point of sale during a transaction.

CPU 124 transmits data representative of the purchased items, the frequent shopper and the conditional value coupons via link 106 to the POS controller 104. The POS controller 104, in turn, determines the price of the scanned item, and the information relating to the customer and coupon.

In accordance with the present invention, POS terminal 102 transmits an identifier of the coupon to the POS controller 104. The identifier identifies a record in a database from which may be determined the amount of the discount based on a set of predefined conditions. The discount is applied to the customer's purchase. The POS controller 104 completes the transaction and transmits data representative of the items purchased, the discounts applied, applicable taxes and the final total of the transaction to the POS terminal 102 which provides the data to printer 108 for printing on a receipt.

Referring to FIG. 2, therein depicted is a block diagram of POS controller 104. The POS controller 104 is a data processing system such as a computer-equipped automatic data processing system including a central processing unit (CPU) 130, a random access memory unit (RAM) 132, a read-only memory unit (ROM) 134 and a

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data storage device 138. The CPU 130 communicates with POS terminal 102 via data

link 106.

CPU 130 is coupled to the data storage device 138 via a bus 140 or another

well-known, high-speed data communications vehicle or channel. CPU 130 is a

5   computer system of the typical variety adapted to execute software programs.

Additionally, CPU 130 may be configured with communications equipment such as

telephony communications and network communications equipment to communicate

with POS terminal 102. Implementation of communications link 106 will be readily

understood by those skilled in the art.

10   Data storage device 138 may be an appropriate combination of semiconducter,

magnetic and/or optical memory that is configured to read and write data maintained in

a file store. Of course, it will be appreciated that data storage sub-system may be one

that consists of multiple disk sub-systems which may be geographically dispersed and

coupled via a network architecture.

15   The data storage device 138 stores a COUPON VALUE DATABASE 142, an

INVENTORY DATABASE 144, a FREQUENT SHOPPER DATABASE 146, a

TRANSACTION DATABASE 148, a REDEEMED COUPON DATABASE 149 and a

COUPON REDEMPTION PROGRAM 150. The FREQUENT SHOPPER

DATABASE 146 maintains a record for each customer which may include information

20   relating to the customer's status. INVENTORY DATABASE 144 maintains a record of

each item in the store and the item's price. TRANSACTION DATABASE 148

maintains a record of each customer transaction. CPU 130, in accordance with the

COUPON REDEMPTION PROGRAM 150, retrieves the earned discount from the

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record of the COUPON VALUE DATABASE 142 that represents the coupon. Thus,

the conditional discount is applied to the customer's current transaction. CPU 130 also,

in accordance with the COUPON REDEMPTION PROGRAM 150, records the number

of coupons that are redeemed at each particular discount value in REDEEMED

5   COUPON DATABASE 149.

Referring now to FIG. 3, therein depicted is a discount coupon 96 representative

of the discount the customer will receive off a subsequent purchase at the retail

establishment. The coupon has multiple discount values, each of which are conditional

upon the transaction satisfying a set of predefined conditions. In particular, the coupon

10   96 provides a discount of $0.96 off any purchase at ABC grocer, provided the visit is

made before November 27, 1997 and the purchase subtotal is greater than $25.00. If

the purchase is before November 27, 1997 and the total purchase price is between

$10.00 and $25.00, a discount of $0.64 is applied to the transaction. Otherwise, the

discount is $0.32 off any purchase less than $10.00 at anytime.

15   The coupon 96 includes an identification number 98 corresponding to a coupon

identifier. The identification number 98 is a string of alphanumeric characters that may

be keyed into an input device. The identification number 98 also corresponds to a UPC

or other bar code 99, which may be scanned by an input device such as the input device

20   110.

The bar code symbology used for the invention may be UPC-A. "System 5" of

UPC-A is designated for coupon use. Such a system allows for the generation of

99,999 unique coupon offers. Typical information represented by a "system 5" bar

code is the manufacturer number and the product number. The bar code 99 acts as an

access code for accessing a database of conditions and values of the printed coupon 96.

The POS controller 104 then analyzes the conditions in the database to see if they have

been met by the customer's purchase, purchase total or date of purchase as appropriate.

5   After completion of the comparison, the POS controller 104 determines which

conditional value to apply to the purchase.

2D bar code symbology may also be used for the conditional coupons 96. A 2D

bar code may contain all of the databases necessary for the comparison to take place.

Instead of the bar code acting as a "pointer" to a database stored elsewhere, the bar code

10   would contain all information pertinent to the conditional value coupon. Symbol's

PDF417, Portable Data File, acts in this manner. A PDF417 symbol contains a

complete date record and requires no access to an external database.

The following paragraphs describe a preferred embodiment of the

INVENTORY DATABASE 144 as illustrated by database table 152, shown in FIG. 4.

15   The INVENTORY DATABASE 144 is used in the present invention to identify the

product and its purchase price when the product identifier is scanned by the input

device or otherwise received. Of course, many changes and alterations may be made to

such tables to effectuate certain functionality depending on particular design and

implementation choices, as is apparent to those skilled in the art.

20   The database table 152 illustrates records relating to products sold by the retail

establishment. Table 152 has a column and row arrangement whereby columns define

fields and rows define records R1 - R6 stored according to the field specification of the

columns. Table 152 includes for each record fields for identifying a PRODUCT

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IDENTIFIER 154, a FAMILY CODE 156, a MANUFACTURER CODE 158, a

DESCRIPTION 160, and a PRICE 162.

Each record R1 - R6 is representative of a product sold by the retail

establishment. Each record R1 - R6 is uniquely identified by PRODUCT IDENTIFIER

5   154. For example, with regard to record R1, a product having PRODUCT

IDENTIFIER of "114207" is for "FUJI 100k film with 24 exposures" having a

MANUFACTURER CODE of "1205", a FAMILY CODE of "103", and a retail price

of "$5.48". Each MANUFACTURER CODE 158 provides a unique identifier

representative of the manufacturer or brand. For example, Manufacturer Code of

10   "1205" represents the company "FUJI" as the manufacturer of the purchased product.

Similarly, MANUFACTURER CODE of "1206" of record R3 represents a product

manufactured by "KODAK", and MANUFACTURER CODE of "1290" of records R5

and R6 represents a retail establishment's (i.e., "Shop Rite") brand product.

Each FAMILY CODE 156 is a unique identifier representative of the product's

15   type or category. For example, a FAMILY CODE of "103" represents the category of

film products and thus records R1, R2 and R3 represent film products. Similarly,

FAMILY CODE of "115" represents the category of baked goods from the bakery, and

a FAMILY CODE of "101" represents the category of goods associated with beverages.

It is important to note that the structure and arrangement of table 152, including

20   its columns and fields, may be altered to suit particular design requirements. Many

columns may be added to table 152 to carry out certain functionality control within a

· data processing system employing a database table like table 152. Such additions and

changes will be apparent to those skilled in the art.

As each item is scanned by the input device 110 (FIG. 1), the POS terminal 102

(FIG. 1) transmits the product identifier to the POS controller 104. POS controller 104

retrieves the record from the INVENTORY DATABASE 144 that corresponds to the

product identifier. The POS Controller 104 therefrom determines the item price and

5   transmits the price to POS terminal 102.

POS terminal 102 receives the price of the item from the POS controller 104

and transmits data representing the description and price of each item to printer 108 via

data link 120. Upon receipt of such data, printer 108 prints the information to generate

a sales receipt of the transaction. In addition, POS controller 104 stores the selected

10   data of each scanned product in the TRANSACTION DATABASE 148 which, as

described below, maintains a subtotal of the transaction as each purchased item is

scanned by input device 110. The POS controller 104, operating according to the

COUPON REDEMPTION PROGRAM 150, (i) determines the discount of a

conditional coupon based on data in the COUPON VALUE DATABASE 142, (ii)

15   stores the discount in the TRANSACTION DATABASE 148, and (iii) deducts the

discount from the subtotal of the transaction. Any applicable taxes are recorded in the

TRANSACTION DATABASE 148 and are then added to the subtotal to generate a

total purchase amount for the transaction. The POS terminal 102 receives this

information and transmits the information to printer 108 for printing indicia on the

20   receipt. Such indicia may identify the item purchased, item price, manufacturer's

coupon discount, time/date of purchase, total of purchase, applicable taxes, and/or total

of purchase.

Referring now to FIG. 5, therein is a database table 164 which represents a

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record relating to a transaction at a retail establishment. Database table 164 (hereinafter referred to as "table 164") represents a record of TRANSACTION DATABASE 148 (FIG. 2). Table 164 has a column and row arrangement whereby columns define fields and rows define records. The TRANSACTION DATABASE 148 typically includes a

5   plurality of records such as that represented by table 164, each record defining a transaction. Each of entries R11, R12, R13, R14 and R15 includes a TRANSACTION CODE 166, a DESCRIPTION 168, a PRICE 170 and a SUBTOTAL 172.

The transaction illustrated in FIG. 5 is for a transaction identified by "91210765" that occurred on January 15, 1998 at 5:10 PM. Entry R11 indicates a

10   Frequent Shopper identified by TRANSACTION CODE "9995" and having a description "Joe Smith, Gold Frequent Shopper". Entry R12 represents a purchased product identified by TRANSACTION CODE of "114207" having a product description of "FUJI 24 EXP. 100K FILM" for a price of $5.48. The SUBTOTAL of entry R12 is equal to the SUBTOTAL of the previous SUBTOTAL of entry R11 plus

15   the PRICE of the product of entry R12. Entry R13 represents a redeemed conditional coupon having a TRANSACTION CODE of "11210", a product description of "CONDITIONAL COUPON" and a price (discount) of "-$2.00" associated with a purchased product of entry R12. The SUBTOTAL of entry R13 is equal to the SUBTOTAL of the previous SUBTOTAL of entry R12 plus the PRICE (discount) of

20   the conditional discount entry R12. Entry R14 represents the taxes for the transaction identified by TRANSACTION CODE of "TAXES" and having a description of "1.08 x SUBTOTAL". The price of the TAXES is determined to be 0.08 (i.e., 8% sales taxes) multiplied by the SUBTOTAL of entry R13 for a PRICE of $0.27. The SUBTOTAL

of entry R14 is equal to the SUBTOTAL of the previous SUBTOTAL of entry R13

plus the price of the TAXES of entry R14. Entry R15 represents the total price for the

transaction and is identified by TRANSACTION CODE of "TOTAL". The TOTAL of

entry R15 is equal to the SUBTOTAL of the previous entry R14.

5   It is important to note that the structure and arrangement of table 164, including

its columns and fields, may be altered to suit particular design requirements.

Appropriate additions and changes will be apparent to those skilled in the art.

Referring to FIG. 6, the following paragraphs describe one embodiment of the

FREQUENT SHOPPER DATABASE 146 that is depicted in database table 174. The

10   retail establishment may rate each customer according to a predetermined criteria to

define or rate the customer's loyalty to the retail establishment. For example a

customer having a "gold" rating may be a customer that visits the store at least once a

week and purchases at least $15.00 in products, while all other customers may have a

"silver" rating.

15   The database table 174 stores a plurality of records R16, R17, R18, R19 and

R20, each relating to a frequent shopper. Table 174 has a column and row arrangement

whereby columns define fields and rows define records stored according to the field

specification of the columns. Each record includes a FREQUENT SHOPPER

NUMBER 176, a NAME 178, an ADDRESS 180, a TELEPHONE NUMBER 182, and

20   a STATUS 184. For example, in table 174 record R16 contains information related to a

customer having a FREQUENT SHOPPER NUMBER of "9995".

Each of records R16, R17, R18, R19 and R20 represents a customer that has a

Frequent Shopper Card account at the retail establishment. For example, with regard to

record R16, "Joe Smith" has a FREQUENT SHOPPER NUMBER of "9995" and a "gold" status. The STATUS 184 of each record may be represented in various other ways. For example, there may be a plurality of sets of frequent shopper numbers, each set corresponding to a status.

5   It is important to note that the structure and arrangement of table 174, including its columns and fields, may change to suit particular design requirements. Many columns may be added to table 174 to effect certain functionality control within a data processing system employing a database table like table 174. Such additions and changes will be apparent to those skilled in the art.

10   Referring to FIG. 7, the following paragraphs describe a preferred embodiment of the COUPON VALUE DATABASE 142 (FIG. 2) as illustrated by database table 190. The table 190 includes a plurality of records, each representing a conditional coupon. These records define the condition that must be satisfied to receive a corresponding predefined discount value for an identified coupon.

15   Table 190 has a column and row arrangement whereby columns define fields and rows define records stored according to the field specification of the columns. Each of records R21 – R30 includes a COUPON IDENTIFIER 192, a VALUE 1 194, a CONDITION 1 196, a VALUE 2 198, a CONDITION 2 200, a VALUE N 202 and a CONDITION N 204.

20   Each of records R1 - R10 represents a coupon that has been issued or distributed to the customers of the retail establishment. Each record includes a plurality of possible discount values in the VALUE fields 194, 198, 202. The discount value of a redeemed coupon that is applied to a purchase is based on the satisfaction of a corresponding

condition defined in the CONDITION fields 196, 200, 204, respectively. For example, with regard to record R21, the coupon having a COUPON IDENTIFIER of "11210" has a first discount value of $2.00 if a purchased item has a TRANSACTION CODE of "114207", a second discount value of $1.28 if a purchased item has a

5   MANUFACTURER CODE of "1205", and a third discount value of $0.64 if any other item is purchased. Although the table 190 includes three value and condition pairs, those skilled in the art will understand that any number of value and condition pairs may be used.

        Records R22 – R30, which have the same record format as record R21,

10   illustrate other embodiments for applying a discount based on the purchase satisfying different conditions. For instance, record R22 is illustrative of a coupon, identified by a COUPON IDENTIFIER of "11211", wherein the application of the discount to the purchase is conditional on the date in which the customer redeems the coupon. For example, in record R22 the discount value is $1.50 off the subtotal of the purchase if

15   the coupon is redeemed before January 10, 1998. If the coupon is redeemed between January 10, 1998 and January 19, 1998, the discount value is $1.00. If the coupon is redeemed between January 20, 1998 and January 29, 1998, the discount value is $0.50. In another embodiment, the coupon can be activated at a future time. For example, the coupon may be issued on December 25, 1997 but cannot be redeemed until after

20   January 1, 1998. Such a delay in activation may be achieved by simply adding the condition to each of the CONDITIONS 194, 198, 202 for record R22 that the purchase date must also be after December 31, 1997. For example, the condition 196 may be "used after December 31, 1997 and used before January 10, 1998". Such Compound

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Conditions (a plurality of conditions which are joined by connecting tests such as "and", "or" and "not") are apparent to those skilled in the art.

Record R23 is illustrative of a coupon having a COUPON IDENTIFIER of "11212" that has a conditional discount based on the total price of the customer's purchase. In record R23, the discount value is $1.50 if the transaction price is greater than $30.00. If the transaction total is between $15.00 and $30.00, the discount value of the coupon is $0.75. If the transaction total is less than or equal to $15.00, the discount value of the coupon is $0.50.

Record R24 is illustrative of a coupon having a COUPON IDENTIFIER of "11213" that has a conditional discount based on the redemption of other coupons toward the customer's purchase. In record R24, the discount value is $2.00 if no other coupons are redeemed toward the present purchase. If other coupons are redeemed, the discount value of the coupon is $1.00. No further value and condition pairs are defined for the record R24.

Record R25 is illustrative of a coupon having a COUPON IDENTIFIER of "11214" that has a conditional discount based on the redemption of a predetermined number of other, like coupons. In record R25, the discount value is $1.00 if three (3) other like coupons are redeemed with the present coupon. If no other like coupons are redeemed with the present coupon, the discount value of the coupon is $0.50.

Record R26 is illustrative of a coupon having a COUPON IDENTIFIER of 11215 that has a conditional discount based on the use of a Frequent Shopper Card and status of the shopper (i.e., "gold" customer). In record R26, the discount value is $1.50 if the customer uses a Frequent Shopper Card with the coupon and is designated as a

"gold " customer. If the customer uses a Frequent Shopper Card with the coupon and is designated as a "silver " customer, the discount value of the coupon is $1.00 off the subtotal of the purchase. If the customer does not use a Frequent Shopper Card with the coupon, the discount value of the coupon is $0.50.

5   Record R27 is illustrative of a coupon having a COUPON IDENTIFIER of "11216" that has a conditional discount based on the incremental number of like coupons redeemed in prior purchases by all customers. In record R27, the discount value is $2.00 if less than 100 like coupons have been redeemed by customers. If between 100 and 200 like coupons have been redeemed by customers, the discount

10   value of the coupon is $0.50. If greater than 200 like coupons have been redeemed by customers, the discount value of the coupon is $0.25.

        Record R28 is illustrative of a coupon having a COUPON IDENTIFIER of "11217" that has a conditional discount based on the number and type of movies currently being rented and/or the customers history of returning movie rentals on time.

15   In record R28, the discount value is for a free movie rental (e.g. two day rental period) of an old release, if the customer is renting at least one new release and one old release. If the customer is renting at least one old release and no new releases, the discount value of the coupon is a free one day rental of the old release being rented. If the customer has historically returned rented movies on time, the discount value of the

20   coupon is a free one day rental of a movie being rented. The POS controller 104 (FIG. 1) may store a customer's rental history in the transaction database 148, such as the dates and times of each rental, the dates and times when each movie was returned, and whether each movie was returned on time or after the end of a rental period.

Accordingly, such rental history may be read to determine whether he has returned movies on time in the past. For example, the number of times the customer has not returned a movie on time may determine whether he is considered to satisfy the above conditions.

5   Record R29 is illustrative of a coupon having a COUPON IDENTIFIER of "11218" that has a conditional discount based on the day of the week of the customer's purchase. In record R29, the discount value is $2.00 if the coupon is redeemed on Monday, Tuesday or Friday. If the coupon is redeemed on the other days of the week, the discount value of the coupon is $1.00.

10   Record R30 is illustrative of a coupon having a COUPON IDENTIFIER of "11219" that has a conditional discount based on the time of day that the coupon is redeemed. In record R30, the discount value is $2.00 if the coupon is redeemed between 5:00 PM and 7:00 PM. If the coupon is redeemed at other times during the day, the discount value of the coupon is $1.00.

15   It is important to note that the structure and arrangement of table 190, including its columns and fields, may change to suit particular design requirements. Many columns may be added to table 190 to carry out certain functionality control within a data processing system employing a database table like table 190. Such additions and changes will be apparent to those skilled in the art.

20   Thus, a variety of conditions have been illustrated in the Table 190. Those skilled in the art will understand that many other conditions may be included. The records R21 – R30 of the database table 190 of FIG. 7 illustrates a number of defined conditions for applying a discount value to transaction. One skilled in the art will

20

appreciate that many other conditions are possible. For example, some coupons may only be redeemed after a predetermined number of like coupons have been presented for redemption. For this condition, each individual coupon may have no value individually, but collectively the coupons may have a value. For instance, coupons

5   may have no value individually, however, when five of these coupons are redeemed, the customer is entitled to a phone card having ten minutes of pre-paid phone time.

Similarly, a combination of coupons may possess a greater value than the sum of the values of coupons included in the combination. For instance, if a coupon having a value of one minute of pre-paid phone time is redeemed, the customer is entitled to a

10   phone card with one minute of pre-paid phone time. However, if five such coupons are redeemed, the customer is entitled to a phone card with ten pre-paid minutes.

In another condition, the coupons may only be redeemed once a certain maximum number of coupons have been redeemed by customers. For example, after two hundred similar coupons have been redeemed by customers, the remaining issued

15   coupons may be of no value. Alternatively, the value of a coupon may increase or decrease depending on the number of similar coupons that have been redeemed by customers.

The present invention may also include the REDEEMED COUPON DATABASE 149 (FIG. 2) which records data relating to the redemption of coupons.

20   Such a database is useful in tracking the redemption of coupons.

Referring now to FIG. 8, database table 210 (hereinafter referred to as "table 210") is an embodiment of REDEEMED COUPON DATABASE 149 (FIG. 2). Table 210 has a column and row arrangement whereby columns define fields and rows define

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records R31, R32, R33 and R34 that are stored according to the field specification of the columns. Each record includes COUPON IDENTIFIER 212, a TOTAL REDEEMED AT VALUE 1 214, a TOTAL REDEEMED AT VALUE 2 216, and a TOTAL REDEEMED AT VALUE N 218. For example, record R31, identified by a

5   COUPON IDENTIFIER of "11210", contains information related to the coupons having a COUPON IDENTIFIER of "11210".

Each record R31 – R34 represents the information relating to the redemption of coupons at selected discount values. For example, with regard to record R31, one coupon having a discount value of VALUE 1 194 (i.e., $2.00 see FIG. 7) was

10   redeemed, four coupons having a discount value of VALUE 2 198 (i.e., $1.28) were redeemed, fifty-two coupons having a discount value of VALUE N 204 (i.e., $0.64) were redeemed.

It should be understood that the POS controller 104 and POS TERMINAL 102 of the purchasing system 100 use the database tables 152, 164, 174, 190 and 210

15   illustrated in FIGS. 4 – 8 to operate together. The flowchart depicted in FIGS. 9A and 9B and described below illustrates how such elements operate together. In particular, described below are the steps carried out by purchasing system 100 within a retail establishment to apply a discount to a customer's transaction based on the transaction meeting a predefined condition.

20   Referring to FIGS. 9A and 9B, a process 250 begins when the POS controller 104 receives the PRODUCT IDENTIFIERS of products being purchased by the customer, as well as any Frequent Shopper Code (Step 252). As described in greater detail above, the price and description of each product that is being purchased by the

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customer may be retrieved from the inventory database 144 (FIG 2). In step 254, the

POS controller 104 receives the conditional coupon code that may be encoded on the

coupon. As described above, the conditional coupon, having a UPC code, is scanned

by input device 110. The conditional coupon code is transmitted to POS terminal 102

5   and provided to the POS controller 104 accordingly. Alternatively, the conditional

coupon code may be manually entered using an alphanumeric keypad. At step 256, the

subtotal of the purchase is continually calculated as each product is added to the

TRANSACTION DATABASE 148. In one embodiment, the cashier operating the

POS terminal may enter a "purchase received" prompt. Such a prompt indicates to the

10   POS terminal that all items have been scanned, and so the value of the coupon should

now be determined. In another embodiment, the value of the coupon is determined

when the coupon is scanned and received by the POS terminal.

The CPU 130 retrieves the appropriate coupon record identified by the

COUPON IDENTIFIER in field 192 of the COUPON VALUE DATABASE 142.

15   From the coupon record, the possible conditions may be retrieved (step 258).

At Step 260, the POS controller 104 compares the first condition (defined in the

CONDITION 1 field) with the current purchase stored in the TRANSACTION

DATABASE 148 (See FIG. 5). For example, for the conditional coupon defined in

record R21 of FIG. 7, the POS controller compares the TRANSACTION CODE of

20   each of the products of the current purchase with the code number "114207" identified

in the CONDITION 1 field 196. Thus, if at Step 262, the Code number "114207" is

recorded in the TRANSACTION DATABASE 148, then the purchase satisfies the first

condition. Then, at step 264, the POS controller 104 retrieves the corresponding

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coupon discount value for the satisfied condition. Thus, if the first condition is satisfied, then the VALUE 1 field 194 in the COUPON VALUE DATABASE 142 (which has a discount value of $2.00) is retrieved. The retrieved discount value is then stored in the TRANSACTION DATABASE 148 (See FIG. 5) and at step 266 the

5   discount value is subtracted from the subtotal of the purchase as described above.

If at Step 262, the purchase does not satisfy the first condition, the POS controller 104, at Step 268, compares the second condition defined in the CONDITION 2 field with the current purchase. If at Step 270, the second condition is satisfied, the POS controller 104 retrieves the corresponding coupon discount value (the VALUE 2

10   field 198) (step 264) and subtracts this value from the subtotal (Step 266).

If, at Step 270, the purchase does not satisfy the second condition, the POS controller 104, in Step 272, compares the nth condition defined in the CONDITION N field with the current purchase. If, at Step 274, the nth condition is satisfied, the POS controller 124 retrieves the corresponding coupon discount value (the value N Field)

15   (step 264) and subtracts this value from the subtotal (step 266).

If, at Step 274, the present transaction does not satisfy the nth condition, an appropriate message is provided to the customer and/or cashier that the coupon is invalid (step 276). Therefore, no discount is applicable to the purchase.

It should be noted that while the bar code may be printed on a coupon, the

20   present invention is not so limited. To the contrary, the present invention contemplates that the bar code may be printed on any item in the retail establishment. In this way, the value of an item in the store may be determined by external conditions that are evaluated when the code is scanned at the POS terminal 102. For instance, when items

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such as milk or canned goods near their expiration dates, the price of that good may be

adjusted accordingly to encourage the sale of the product. The conditions on the

products could be new merchandise, merchandise nearing an expiration date, or

merchandise past an expiration date. These conditional discounts on the products thus

5   eliminate the need to change the prices in a database. A time code stamped into the bar

code symbol would be used to automatically adjust the price. Also, items could have

different prices depending on whether other items were purchased as well.

Accordingly, having fully described the present invention by way of example

with reference to the attached drawing figures, it will be readily appreciated that many

10   changes and modifications may be made to the invention and to any of the exemplary

embodiments shown and/or described herein without departing from the spirit or scope

of the invention which is defined in the appended claims.

What is claimed is:

1   1.   A method of processing a purchase; said method comprising:

2   receiving an identifier;

3   determining a first discount and second discount from the identifier, the first

4   discount having a first discount value and the second discount having a second

5   discount value;

6   determining a predetermined condition of the purchase;

7   selecting one of the first discount and the second discount based on whether the

8   predetermined condition is satisfied, thereby generating a selected discount

9   having a selected discount value; and

10   applying the selected discount to the purchase.

1   2.   The method of claim 1, in which the step of receiving an identifier comprises:

2   scanning a bar code.

1   3.   The method of claim 1, in which the step of receiving an identifier comprises:

2   reading a magnetic storage medium.

1   4.   The method of claim 1, in which the identifier is provided on a coupon.

1   5.   The method of claim 1, in which the identifier is provided on a product.

1   6.   The method of claim 1, in which the identifier is provided on a coupon having a

2   first discount value that is based on the value of spare change due from a prior

3   purchase.

1   7.   The method of claim 6, in which the first discount value and the second

2   discount value are each a predetermined multiple of the value of spare change

3   due from a prior purchase.

1   8.   The method of claim 1, in which the step of determining a first discount and a

2   second discount from the identifier comprises:

3   retrieving a record based on the identifier; and

4   determining the first discount and the second discount from the record.

1   9.   The method of claim 1, in which the step of determining a predetermined

2   condition of the purchase comprises:

3   retrieving a record based on the identifier; and

4   determining the predetermined condition from the record.

1   10.   The method of claim 1, in which the step of determining a first discount and a

2   second discount from the identifier comprises:

3   decoding the identifier to provide a record including the first discount and the

4   second discount.

1   11.   The method of claim 1, in which the determining a predetermined condition

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2   from the identifier comprises:

.3   decoding the identifier to provide a record including the predetermined

4   condition.

1   12.   The method of claim 1, in which the first discount value is a predetermined

2   percentage of the amount of spare change due from a prior purchase.

1   13.   The method of claim 1, in which the first discount value is a reduction of a

2   purchase price of a predetermined product purchased.

1   14.   The method of claim 1, in which the first discount value is a reduction of a

2   subtotal of the purchase.

1   15.   The method of claim 1, further comprising:

2   receiving an item identifier representing an item of the purchase; and

3   selecting one of the first discount and the second discount based on whether the

4   item identifier is a predetermined item identifier.

1   16.   The method of claim 1, further comprising:

2   receiving a manufacturer identifier representing a manufacturer of an item of the

3   purchase; and

4   selecting one of the first discount and the second discount based on whether the

5   manufacturer identifier is a predetermined manufacturer identifier.

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1   17.   The method of claim 1, further comprising:

2   determining a subtotal of the purchase; and

3   selecting one of the first discount and the second discount based on whether the

4   subtotal is greater than a predetermined threshold.

1   18.   The method of claim 1, further comprising:

2   receiving a purchase price of an item of the purchase; and

3   selecting one of the first discount and the second discount based on whether the

4   purchase price is greater than a predetermined threshold.

1   19.   The method of claim 1, further comprising:

2   determining a date of the purchase; and

3   selecting one of the first discount and the second discount based on whether the

4   date is within a predetermined time period.

1   20.   The method of claim 1, further comprising:

2   determining a day of the purchase; and

3   selecting one of the first discount and second discount based on whether the day

4   is a predetermined day.

1   21.   The method of claim 1, further comprising:

2   determining a time of day of the purchase; and

3   selecting one of the first discount and second discount based on whether the

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4   time of day is within a predetermined time period.

1   22.   The method of claim 1, further comprising:

2   recording a number of discounts redeemed by a purchaser; and

3   selecting one of the first discount and second discount based on whether the

4   number of discounts redeemed is greater than a predetermined number of

5   redeemed discounts.

1   23.   The method of claim 22, in which the number of discounts redeemed is a

2   number of discounts redeemed at a present purchase.

1   24.   The method of claim 22, in which the number of discounts redeemed is a

2   number of total discounts redeemed at prior purchases.

1   25.   The method of claim 1, further comprising:

2   recording a number of similar discounts redeemed by other purchasers; and

3   selecting one of the first discount and second discount based on whether the

4   number of similar discounts redeemed by other purchasers is less than a

5   predetermined number of discounts.

1   26.   The method of claim 1, further comprising:

2   receiving a signal that represents a frequent shopper account; and

3   selecting one of the first discount and second discount based on whether the

4   frequent shopper account is received.

1   27.   The method of claim 1, further comprising:

2   determining a second predetermined condition of the purchase;

3   selecting the first discount based on whether the predetermined condition is

4   satisfied; and

5   selecting the second discount based on whether the second predetermined

6   condition is satisfied.

1   28.   The method of claim 27, further comprising:

2   selecting the first discount based on whether both the predetermined condition

3   and the second predetermined condition are satisfied.

1   29.   The method of claim 1, further comprising:

2   receiving a purchase price of the purchase; and

3   reducing the purchase price of the purchase based on the selected discount

4   value.

1   30.   The method of claim 1, further comprising:

2   receiving a purchase price of a product; and

3   reducing the purchase price of the product based on the selected discount value.

1   31.   The method of claim 1, wherein the predetermined condition is based on

2   whether a predefined product is purchased.

1   32.   The method of claim 1, wherein the predetermined condition is based on

2   whether a predefined brand of product is purchased.

1   33.   The method of claim 1, wherein the predetermined condition is based on

2   whether a subtotal of the purchase is greater than a predetermined threshold.

1   34.   The method of claim 1, wherein the predetermined condition is based on

2   whether a purchase price of a product is greater than a predetermined threshold.

1   35.   The method of claim 1, wherein the predetermined condition is based on

2   whether a date of the purchase is within a predetermined time period.

1   36.   The method of claim 1, wherein the predetermined condition is based on

2   whether a day of the purchase is a predetermined day.

1   37.   The method of claim 1, wherein the predetermined condition is based on

2   whether a time of day of the purchase is within a predetermined time period.

1   38.   The method of claim 1, wherein the predetermined condition is based on

2   whether a number of discounts redeemed is greater than a predetermined

3   number of redeemed discounts.

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1   39.   The method of claim 1, wherein the predetermined condition is based on

2   whether a number of similar discounts redeemed by other purchasers is less than

3   a predetermined number of discounts.

1   40.   The method of claim 1, wherein the predetermined condition is based on

2   whether a frequent shopper account is received.

1   41.   A method of processing a purchase, said method comprising:

2   determining a purchase price;

3   scanning an identifier;

4   retrieving a record from a database based on the identifier;

5   determining a first discount and second discount from the record, the first

6   discount having a first discount value and the second discount having a second

7   discount value;

8   determining a predetermined condition from the record;

9   selecting one of the first discount and the second discount based on whether the

10   predetermined condition is satisfied, thereby generating a selected discount

11   having a selected discount value; and

12   reducing the purchase price based on the selected discount.

1   42.   A method of processing a purchase, said method comprising:

2   determining a purchase price;

3   scanning an identifier;

33

4   retrieving a record from a database based on the identifier;

5   determining a first discount and second discount from the record, the first

6   discount having a first discount value and the second discount having a second

7   discount value;

8   determining a first predetermined condition from the record and a second

9   predetermined condition from the record;

10   selecting one of the first discount and the second discount based on which of

11   the first predetermined condition and second predetermined condition is

12   satisfied, thereby generating a selected discount having a selected discount

13   value; and

14   reducing the purchase price based on the selected discount value.

1   43.   An apparatus for processing a purchase comprising:

2   a storage device; and

3   a processor connected to the storage device,

4   the storage device storing a program for controlling the processor; and

5   the processor operative with the program to:

6   receive an identifier;

7   determine a first discount and second discount from the identifier, the

8   first discount having a first discount value and the second discount having a

9   second discount value;

10   determine a predetermined condition of the purchase;

11   select one of the first discount and the second discount based on whether

12   the predetermined condition is satisfied, thereby generating a selected discount

13   having a selected discount value; and

14   apply the selected discount to the purchase.

1   44.   A computer readable medium encoded with processing instructions for

2   implementing a method of processing a purchase, said method comprising:

3   receiving an identifier;

4   determining a first discount and second discount from the identifier, the first

5   discount having a first discount value and the second discount having a second

6   discount value;

7   determining a predetermined condition of the purchase;

8   selecting one of the first discount and the second discount based on whether the

9   predetermined condition is satisfied, thereby generating a selected discount

10   having a selected discount value; and

11   applying the selected discount to the purchase.

1   45.   An apparatus for processing a purchase comprising:

2   a storage device; and

3   a processor connected to the storage device,

4   the storage device storing a program for controlling the processor; and

5   the processor operative with the program to:

6   determine a purchase price;

7   scan an identifier;

8   retrieve a record from a database based on the identifier;

9   determine a first discount and second discount from the record, the first

10   discount having a first discount value and the second discount having a second

11   discount value;

12   determine a predetermined condition from the record;

13   select one of the first discount and the second discount based on whether

14   the predetermined condition is satisfied, thereby generating a selected discount

15   having a selected discount value; and

16   reduce the purchase price based on the selected discount.

1   46.   A computer readable medium encoded with processing instructions for

2   implementing a method of processing a purchase, said method comprising:

3   determining a purchase price;

4   scanning an identifier;

5   retrieving a record from a database based on the identifier;

6   determining a first discount and second discount from the record, the first

7   discount having a first discount value and the second discount having a second

8   discount value;

9   determining a predetermined condition from the record;

10   selecting one of the first discount and the second discount based on whether the

11   predetermined condition is satisfied, thereby generating a selected discount

12   having a selected discount value; and

13   reducing the purchase price based on the selected discount.

1   47.   An apparatus for processing a purchase comprising:

2   a storage device; and

3   a processor connected to the storage device,

4   the storage device storing a program for controlling the processor; and

5   the processor operative with the program to:

6   determine a purchase price;

7   scan an identifier;

8   retrieve a record from a database based on the identifier;

9   determine a first discount and second discount from the record,

10   the first discount having a first discount value and the second discount having a

11   second discount value;

12   determine a first predetermined condition from the record and a

13   second predetermined condition from the record;

14   select one of the first discount and the second discount based on

15   which of the first predetermined condition and second predetermined condition

16   is satisfied, thereby generating a selected discount having a selected discount

17   value; and

18   reduce the purchase price based on the selected discount value.

1   48.   A computer readable medium encoded with processing instructions for

2   implementing a method of processing a purchase, said method comprising:

3   determining a purchase price;

4   scanning an identifier;

5   retrieving a record from a database based on the identifier;

6   determining a first discount and second discount from the record, the first

7   discount having a first discount value and the second discount having a second

8   discount value;

9   determining a first predetermined condition from the record and a second

10   predetermined condition from the record;

11   selecting one of the first discount and the second discount based on which of

12   the first predetermined condition and second predetermined condition is

13   satisfied, thereby generating a selected discount having a selected discount

14   value; and

15   reducing the purchase price based on the selected discount value.

FIG. 1

FIG. 2

96

GOOD FOR YOUR NEXT VISIT**

$0.96 OFF ANY PURCHASE OVER **$25***
3x OFFER GOOD UNTIL 11/27/97
OR
$0.64 OFF ANY PURCHASE OVER **$10***
2x OFFER GOOD UNTIL 11/27/97

98

ABC
GROCER

105789231

99

$0.32 OFF ANY PURCHASE UNDER $10

*DOUBLE AND TRIPLE VALUES NOT ELIGIBLE WITH THE
USAGE OF OTHER
MANUFACTURER OR STORE OFFERS.
**LIMIT 1 COUPON PER DAY
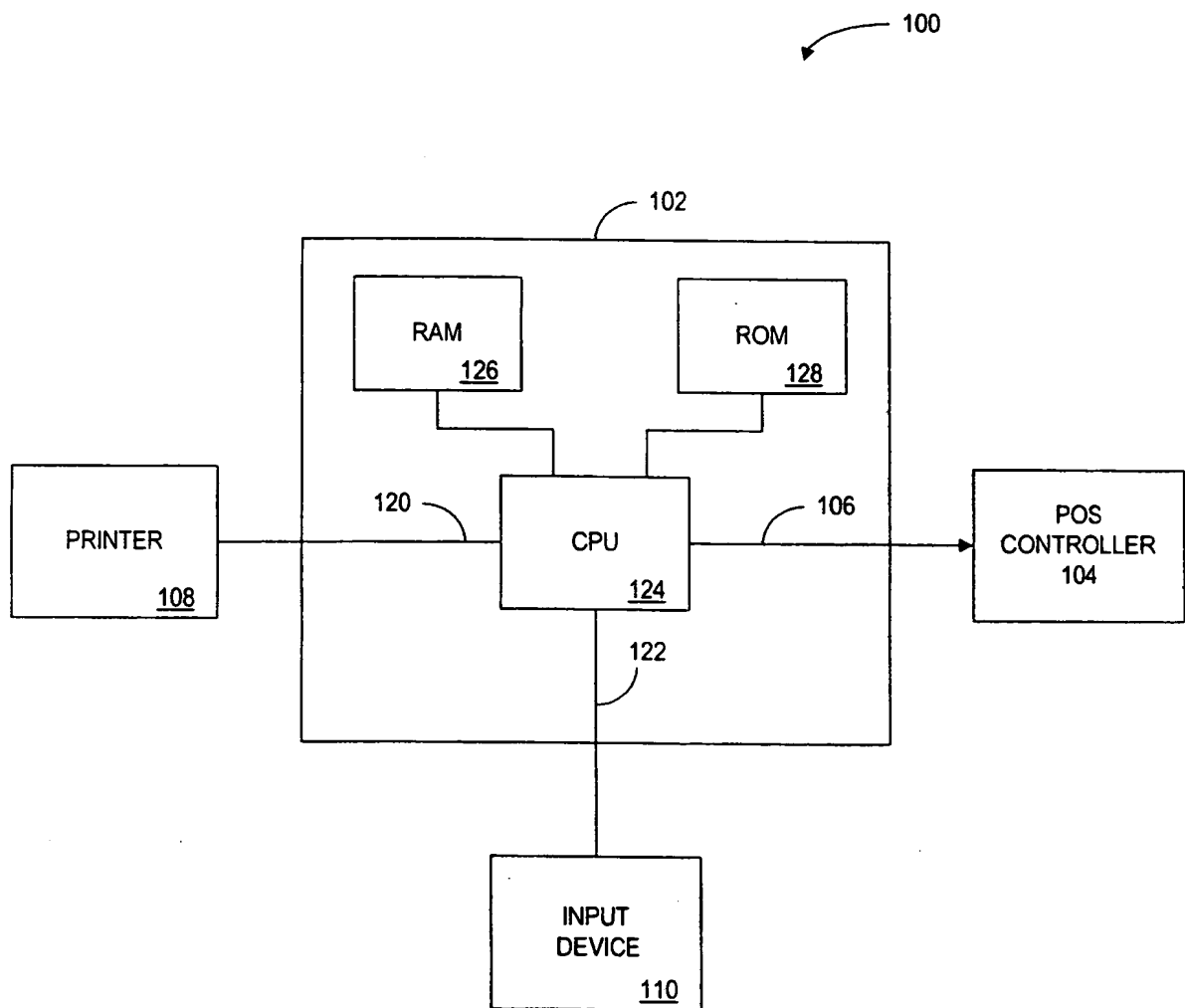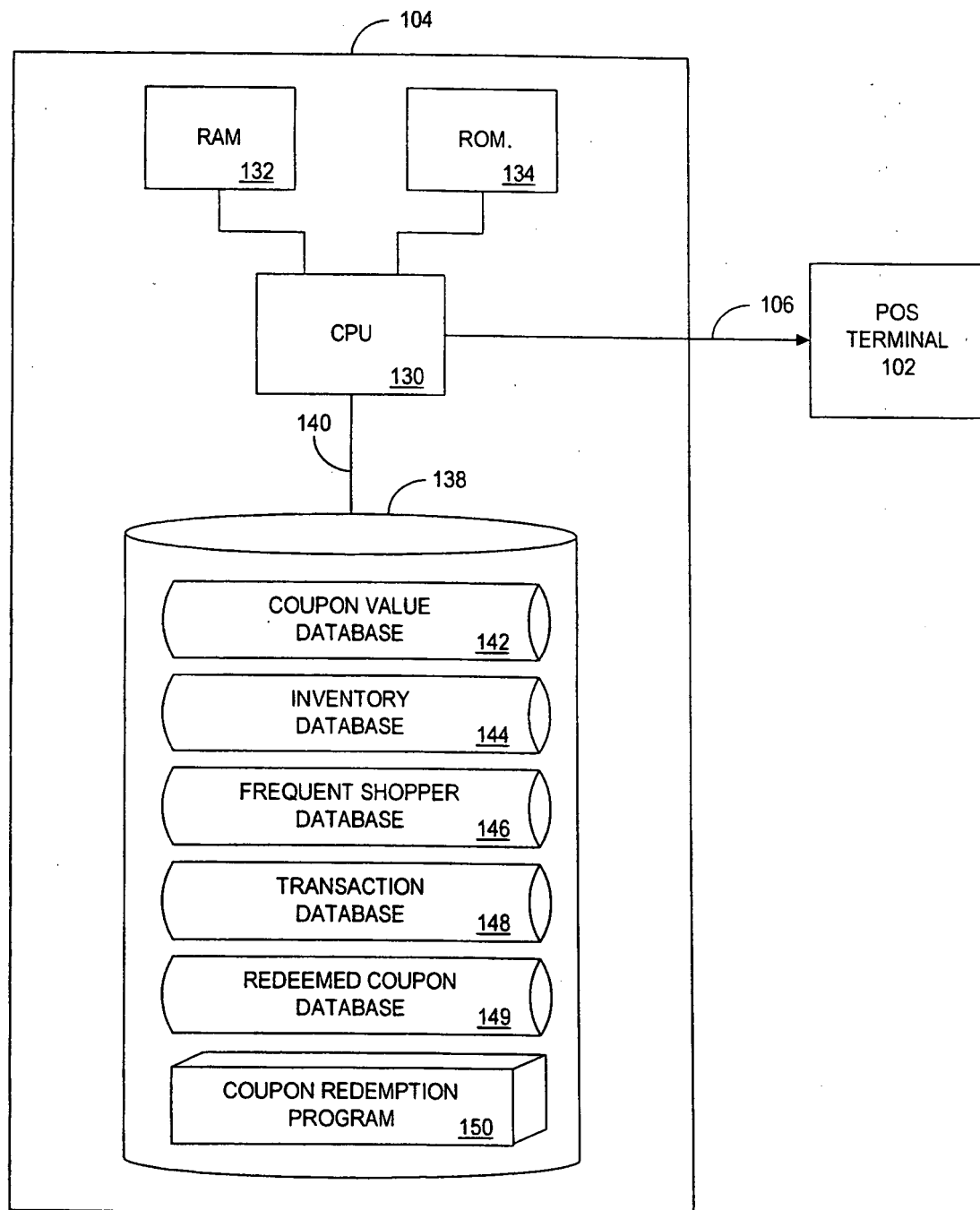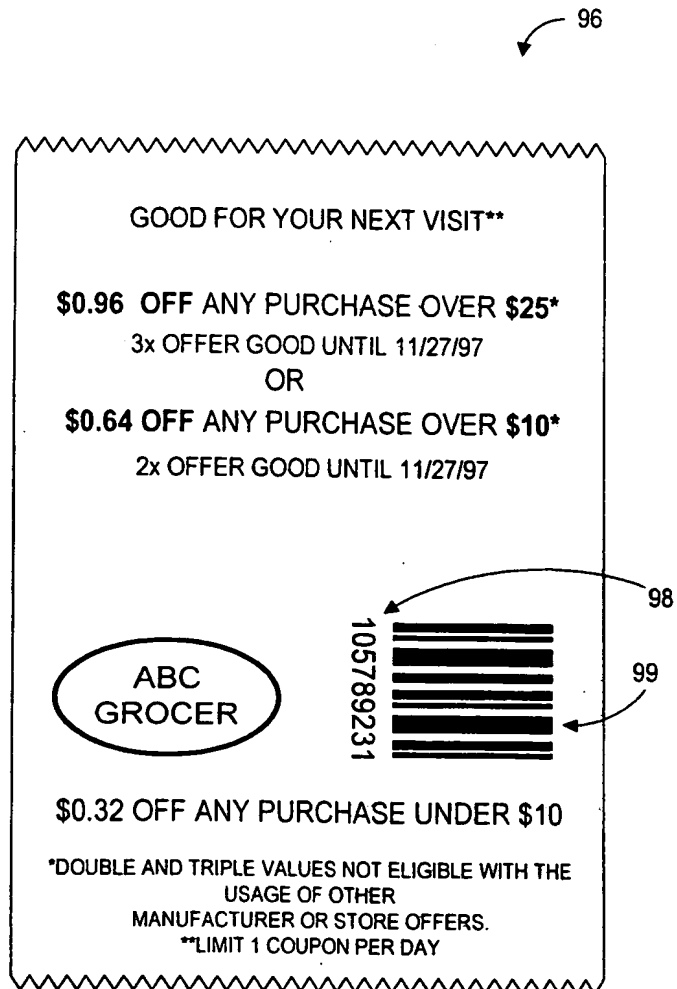
FIG. 3

PRODUCT IDENTIFIER 154	FAMILY CODE 156	MANUFACTURER CODE 158	DESCRIPTION 160	PRICE 162
114207	103	1205	FUJI 24 EXP. 100K FILM	$5.48
114208	103	1205	FUJI 24 EXP. 200K FILM	$5.82
114209	103	1206	KODAK 36 EXP. 200K FILM	$6.27
114210	115	1289	1 LOAF FRENCH BREAD	$1.28
114211	115	1290	1 LOAF SHOP RIGHT WHEAT BREAD	$2.99
114212	101	1290	1 LITER SHOP RIGHT SODA	$0.99

152

R1 R2 R3 R4 R5 R6

FIG. 4

164

TRANSACTION #91210765   DATE 1/15/98   TIME 5:10 PM

TRANSACTION CODE 166	DESCRIPTION 168	PRICE 170	SUBTOTAL 172
9995	JOE SMITH GOLD FREQUENT SHOPPER	-	-
114207	FUJI 24 EXP. 100K FILM	$5.48	$5.48
11210	CONDITIONAL COUPON	-$2.00	$3.48
TAXES	.08 x SUBTOTAL	$0.27	$3.75
TOTAL			$3.75

R11 → (row 9995)
R12 → (row 114207)
R13 → (row 11210)
R14 → (row TAXES)
R15 → (row TOTAL)

FIG. 5

174 →

FREQUENT SHOPPER NUMBER 176	NAME 178	ADDRESS 180	TELEPHONE NUMBER 182	STATUS 184
9995	JOE SMITH	123 MAIN ST. ANYTOWN, USA	(111)222-5555	GOLD
9996	SUSAN GREEN	1527 MADISON AVE. ANYTOWN, USA	(222)333-6666	GOLD
9997	MARY EVANS	64 STATE ST. ANYTOWN, USA	(333)123-4567	SILVER
9998	JOHN ANDREWS	890 RIVER PL. ANYTOWN, USA	(444)999-2222	SILVER
9999	LISA MURRAY	5432 PARK AVE. ANYTOWN, USA	(555)777-3333	GOLD

R16
R17
R18
R19
R20

FIG. 6

190

COUPON IDENTIFIER 192	VALUE 1 194	CONDITION 1 196	VALUE 2 198	CONDITION 2 200	VALUE N 202	CONDITION N 204
11210	$2.00	PURCHASE ITEM #114207	$1.28	PURCHASE FROM MFG# 1205	$0.64	MADE A PURCHASE
11211	$1.50	USE BEFORE 1/10/98	$1.00	USE BEFORE 1/20/98	$0.50	USED BEFORE 1/30/98
11212	$1.50	TRANSACTION TOTAL IS >$30	$0.75	15<TRANSACTION TOTAL<30	$0.50	TRANSACTION TOTAL ≤ $15.00
11213	$2.00	NO COUPONS USED DURING PURCHASE	$1.00	USED OTHER COUPONS DURING PURCHASE	NA	NA
11214	$1.00	REDEEM WITH 3 OTHER LIKE COUPONS	$0.50	REDEEM W/OUT SIMILAR COUPONS	NA	NA
11215	$1.50	USE FREQUENT SHOPPER GOLD CARD	$1.00	USE FREQUENT SHOPPER SILVER CARD	$0.50	NO FREQUENT SHOPPER CARD USED
11216	$2.00	<100 OTHER LIKE COUPONS REDEEMED	$0.50	100<LIKE COUPONS REDEEMED ≤200	$0.25	>201 LIKE COUPONS REDEEMED
11217	FREE OLD RELEASE MOVIE RENTAL	RENT 1 NEW RELEASE AND 1 OLD RELEASE	FREE 1 DAY RENTAL	RENT 1 OLD RELEASE, 0 NEW RELEASE	FREE 1 DAY RENTAL	CUST. HISTORICALLY ON TIME RETURNING MOVIES
11218	$2.00	REDEEMED ON MON., TUES.,FRI.	$1.00	REDEEMED ON WED., THURS., SAT., SUN.	NA	NA
11219	$2.00	REDEEMED AT 5:00-7:00 PM	$1.00	REDEEMING TIME ≠ 5:00-7:00 PM	NA	NA

R21
R22
R23
R24
R25
R26
R27
R28
R29
R30

FIG. 7

210

COUPON IDENTIFIER 212	TOTAL REDEEMED AT VALUE 1 214	TOTAL REDEEMED AT VALUE 2 216	TOTAL REDEEMED AT VALUE N 218
11210	1	4	52
11211	5	24	7
11212	52	1	7
11213	21	18	46

R31

R32

R33

R34

FIG. 8

9 / 10

— 250

┌───┐
│   RECEIVE ITEM CODE(S) FOR PURCHASE   │
│   252   │
└───┘
                     │
                     ▼
┌───┐
│   RECEIVE CONDITIONAL COUPON CODE   │
│   254   │
└───┘
                     │
                     ▼
┌───┐
│   RECEIVE SUBTOTAL PROMPT   │
│   256   │
└───┘
                     │
                     ▼
┌───┐
│   RETRIEVE THE POSSIBLE CONDITION(S)   │
│   FROM THE COUPON VALUE DATABASE   │
│   258   │
└───┘
                     │
                     ▼
┌───┐
│   APPLY CONDITION 1 TO PURCHASE   │
│   260   │
└───┘
                     │
                     ▼
                   (A)
                TO FIG. 9B

FIG. 9A

FROM FIG. 9A

(A)

DOES
PURCHASE FULFILL
CRITERIA SPECIFIED BY
CONDITION 1?
262

NO →

APPLY CONDITION 2
TO PURCHASE
268

YES

DOES
PURCHASE FULFILL
CRITERIA SPECIFIED BY
CONDITION 2?
270

YES ←

NO

APPLY CONDITION N
TO PURCHASE
272

RETRIEVE APPROPRIATE
VALUE FROM COUPON
DATABASE
264

← YES

DOES
PURCHASE FULFILL
CRITERIA SPECIFIED BY
CONDITION N?
270

SUBTRACT VALUE
FROM PURCHASE
266

NO

END ←

OUTPUT "INVALID COUPON"
MESSAGE
272
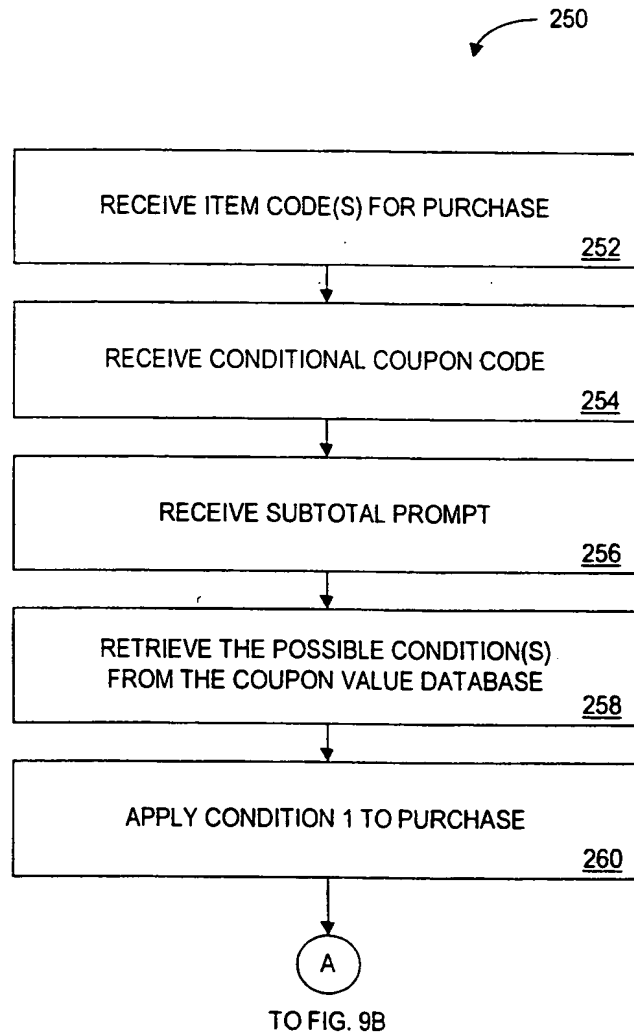
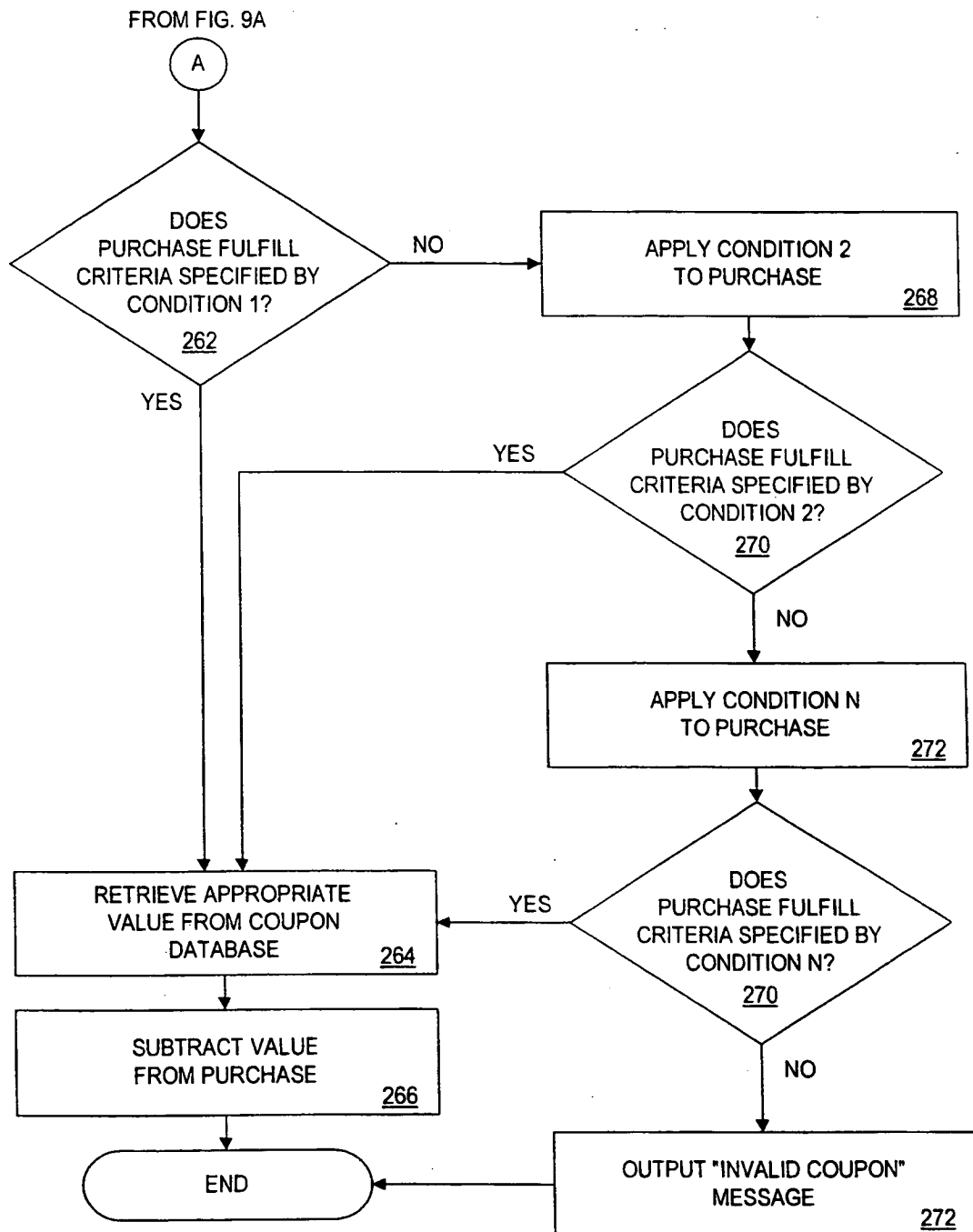FIG. 9B

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US99/10624

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :G06F 17/60

US CL :705/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/14, 16, 17, 20, 23

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,723,212 A (MINDRUM et al.) 28 FEBRUARY 1988 see Abstract, Figs. 1, 2; cols. 5-8	1-48
A	US 5,173,851 A (OFF et al.) 22 DECEMBER 1992 see Abstract; Figs. 1, 2; cols. 5-8	1-48
A	US 5,192,854 A (COUNTS) 09 MARCH 1993 see Abstract	1-48
A	US 5,353,218 A (DE LAPA et al.) 04 OCTOBER 1994 see Abstract; Figs. 1-5; cols. 2-4	1-48
A	US 5,581,064 A (RILEY et al.) 03 DECEMBER 1996 see Abstract	1-48

[X] Further documents are listed in the continuation of Box C.   [ ] See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance		
"E"	earlier document published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		
		"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 AUGUST 1999	0 5 NOV 1999

Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer STEPHEN R. TKACS
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,602,377 A (BELLER et al.) 11 FEBRUARY 1997 see Abstract	1-48
A	US 5,612,868 A (OFF et al.) 18 MARCH 1997 see Abstract; cols. 1, 2; cols. 3-9	1-48
A	WO 97/50064 (WEST) 31 DECEMBER 1997 see Abstract	1-48
A	U.P.C. Coupon Code Guidelines Manual, Chapter 5; Uniform Commercial Code, Inc. (http://www.uc-council.org/d31-3.htm) download date: 12 MARCH 1998	1-48
A	Promotion Times - An SCA Quarterly Newsletter; SCA Promotions; APRIL 1998	1-48